

COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled RNA INTERFERENCE PATHWAY GENES AS TOOLS FOR TARGETED GENETIC INTERFERENCE, the specification of which:

- ☐ is attached hereto.
☒ was filed on October 13, 2000, as Application Serial No. 09/689992.
☐ was described and claimed in PCT International Application No. _____ filed on _____ and as amended under PCT Article 19 on _____.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose all information I know to be material to patentability in accordance with Title 37, Code of Federal Regulations, §1.56.

I hereby claim the benefit under Title 35, United States Code, §119(e)(1) of any United States provisional application(s) listed below:

<u>U.S. Serial No.</u>	<u>Filing Date</u>	<u>Status</u>
60/159,776	October 15, 1999	Pending
60/193,218	March 30, 2000	Pending

I hereby appoint the following attorneys and/or agents to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

J. Peter Fasse, Reg. No. 32,983
John W. Freeman, Reg. No. 29,066
John F. Hayden, Reg. No. 37,640
Timothy A. French, Reg. No. 30,175

Lee Crews, Reg. No. 43,567
Janis K. Fraser, Reg. No. 34,819
Anita L. Meiklejohn, Reg. No. 35,283

Address all telephone calls to J. PETER FASSE at telephone number (617) 542-5070.

Address all correspondence to J. PETER FASSE at:

FISH & RICHARDSON P.C.
225 Franklin Street
Boston, MA 02110-2804

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patents issued thereon.

Combined Declaration and Power of Attorney

Page 2 of 2 Pages

Full Name of Inventor: CRAIG C. MELLO
Inventor's Signature: *Craig C. Mello*
Residence Address: 19 Ryan Road
Shrewsbury, MA 01545
Citizenship: United States of America
Post Office Address: 19 Ryan Road
Shrewsbury, MA 01545

Date: 1/25/01

Full Name of Inventor: ANDREW FIRE
Inventor's Signature: _____
Residence Address: 2320 Bright Leaf Way
Baltimore, MD 21209
Citizenship: United States of America
Post Office Address: 2320 Bright Leaf Way
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Date: _____

Full Name of Inventor: HIROAKI TABARA
Inventor's Signature: *Hiroaki Tabara*
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Worcester, MA 01545
Citizenship: Japan
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Date: 1/25/01

Full Name of Inventor: ALLA GRISHOK
Inventor's Signature: *Ally*
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Citizenship: Ukraine
Post Office Address: 18 K Shrewsbury Green Drive
Shrewsbury, MA 01545

Date: 1/25/01

Combined Declaration and Power of Attorney

Page 2 of 2 Pages

Full Name of Inventor: CRAIG C. MELLO

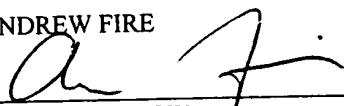
Inventor's Signature: _____ Date: _____

Residence Address: 19 Ryan Road
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Citizenship: United States of America

Post Office Address: 19 Ryan Road
Shrewsbury, MA 01545

Full Name of Inventor: ANDREW FIRE

Inventor's Signature:  _____ Date: 2/2/01

Residence Address: 2320 Bright Leaf Way
Baltimore, MD 21209

Citizenship: United States of America

Post Office Address: 2320 Bright Leaf Way
Baltimore, MD 21209

Full Name of Inventor: HIROAKI TABARA

Inventor's Signature: _____ Date: _____

Residence Address: 145 Orient Street
Worcester, MA 01545

Citizenship: Japan

Post Office Address: 145 Orient Street
Worcester, MA 01545

Full Name of Inventor: ALLA GRISHOK

Inventor's Signature: _____ Date: _____

Residence Address: 18 K Shrewsbury Green Drive
Shrewsbury, MA 01545

Citizenship: Ukraine

Post Office Address: 18 K Shrewsbury Green Drive
Shrewsbury, MA 01545

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Craig C. Mello et al. Art Unit : 1637
 Serial No. : 09/689,992 Examiner : Teresa E. Strzelecka
 Filed : October 13, 2000
 Title : RNA INTERFERENCE PATHWAY GENES AS TOOLS FOR TARGETED
 GENETIC INTERFERENCE

Commissioner for Patents
 Washington, D.C. 20231

REVOCATION AND NEW POWER OF ATTORNEY

Under 37 CFR §3.73(b) UNIVERSITY OF MASSACHUSETTS, a university, certifies that it is the assignee of a portion of the right, title and interest in the patent application identified above by virtue of an assignment from inventors of the patent application identified above. The assignment was recorded in the U.S. Patent and Trademark Office at Reel 011639, Frame 0064 on March 20, 2001.

The undersigned, whose title is supplied below, is empowered to act on behalf of the assignee.

The undersigned, acting on behalf of the assignee, hereby revokes all powers of attorney previously granted in the application and appoints:

James E. Cockfield	Reg. No. 19,162	David J. Ridders	Reg. No. 43,882
Thomas V. Smurzynski	Reg. No. 24,798	Jonathan M. Sparks	Reg. No. 53,624
Ralph A. Loren	Reg. No. 29,325	Debra J. Milasincic	Reg. No. 46,931
Giulio A. DeConti, Jr.	Reg. No. 31,503	David R. Burns	Reg. No. 46,590
Ann Lamport Hammitte	Reg. No. 34,858	Sean D. Detweiler	Reg. No. 42,482
Elizabeth A. Hanley	Reg. No. 33,505	Cynthia L. Kanik	Reg. No. 37,320
Amy E. Mandragouras	Reg. No. 36,207	Theodore R. West	Reg. No. 47,202
Anthony A. Laurentano	Reg. No. 38,220	Shayne Y. Huff	Reg. No. 44,784
Kevin J. Canning	Reg. No. 35,470	Hathaway P. Russell	Reg. No. 46,488
Jane E. Remillard	Reg. No. 38,872	John S. Curran	Reg. No. 50,445
DeAnn F. Smith	Reg. No. 36,683	Lisa M. DiRocco	Reg. No. 51,619

CERTIFICATE OF MAILING BY FIRST CLASS MAIL

I hereby certify under 37 CFR §1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated below and is addressed to the Commissioner for Patents, Washington, D.C. 20231.

Date of Deposit

Signature

Typed or Printed Name of Person Signing Certificate

Applicant : Craig C. Mello et al.
Serial No. : 09/689,992
Filed : October 13, 2000
Page : 2

Attorney's Docket No.: 07917-105001 / UMMC 00-04;
Isis: DOC-0195

Peter C. Lauro	Reg. No. 32,360	Danielle L. Herritt	Reg. No. 43,670
Jeanne M. DiGiorgio	Reg. No. 41,710	Merideth C. Arnold	Reg. No. 52,568
Megan E. Williams	Reg. No. 43,270	Peter W. Dini	Reg. No. 52,821
Jeremiah Lynch	Reg. No. 17,425	Cynthia M. Soroos	Reg. No. 53,623
Maria C. Laccotripe	Limited Recognition		
Zacharakis	Under 37 C.F.R. § 10.9(b)		

with full power of substitution and revocation, to prosecute the application and to transact all business in the United States Patent and Trademark Office connected therewith.

All correspondence regarding the application should be sent to:

Send Correspondence to DeAnn F. Smith at **Customer Number: 000959** whose address is:

Lahive & Cockfield, LLP, 28 State Street, Boston, MA 02109

Direct Telephone Calls to: DeAnn F. Smith, (617) 227-7400

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States

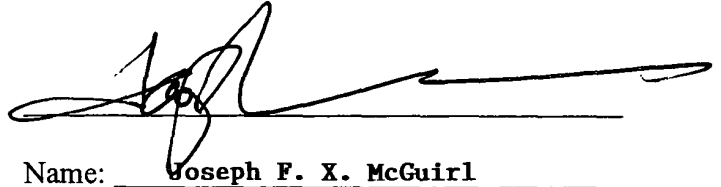
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Serial No. : 09/689,992
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Isis: DOC-0195

Code and that such willful false statements may jeopardize the validity of the application or any patents issued thereon.

Respectfully submitted,

Date: April 3, 2003



Name: Joseph F. X. McGuirl

Title: Executive Director, OTM

University of Massachusetts Medical Center
Office of Technology Management
365 Plantation Street, Suite 130
Worcester, MA 01605

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Commissioner for Patents
Washington, D.C. 20231

REVOCATION AND NEW POWER OF ATTORNEY

Under 37 CFR §3.73(b) THE CARNEGIE INSTITUTION OF WASHINGTON, a
federally-chartered corporation, certifies that it is the assignee of a portion of the right, title and
interest in the patent application identified above by virtue of an assignment from an inventor of
the patent application identified above. The assignment was recorded in the U.S. Patent and
Trademark Office at
Reel 011638, Frame 0540 on March 20, 2001.

The undersigned, whose title is supplied below, is empowered to act on behalf of the
assignee.

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Jeanne M. DiGiorgio	Reg. No. 41,710	Merideth C. Arnold	Reg. No. 52,568
Megan E. Williams	Reg. No. 43,270	Peter W. Dini	Reg. No. 52,821
Jeremiah Lynch	Reg. No. 17,425	Cynthia M. Soroos	Reg. No. 53,623
Maria C. Laccotripe	Limited Recognition		
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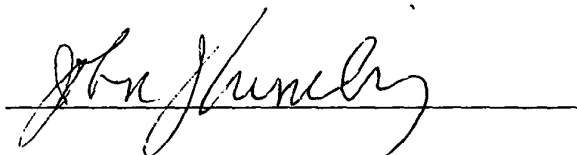
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Attorney's Docket No.: 07917-105001 / UMMC 00-04;
Isis: DOC-0195

Code and that such willful false statements may jeopardize the validity of the application or any patents issued thereon.

Respectfully submitted,

Date: 4-1-03



Name: John J. Lively

Title: Director of Administration and Finance

^{Institution}
The Carnegie Institute of Washington
1530 P Street, N.W.
Washington, D. C. 20005
20595753.doc

Applicant or Patentee: Mello et al.
 Serial or Patent No.: 09/689,992
 Filed or Issued: October 13, 2000
 For: RNA INTERFERENCE PATHWAY GENES AS TOOLS FOR TARGETED GENETIC INTERFERENCE

VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS
(37 CFR 1.9(f) and 1.27(d)) — NONPROFIT ORGANIZATION

I hereby declare that I am an official empowered to act on behalf of the nonprofit organization identified below:

Name of Organization: UNIVERSITY OF MASSACHUSETTS
 Address of Organization: One Beacon Street, 26th Floor, Boston, MA 02108

Type of Organization:

- ☒ University or Other Institution of Higher Education
☐ Tax Exempt Under Internal Revenue Service Code (26 USC 501(a) and 501(c)(3))
☐ Nonprofit Scientific or Educational Under Statute of State of the United States of America
 (Name of State: _____) (Citation of Statute: _____)
☐ Would qualify as tax exempt under Internal Revenue Service Code (26 USC 501(a) and 501(c)(3)) if located in the United States of America
☐ Would qualify as nonprofit scientific or educational under Statute of State of the United States of America if located in the United States of America
 (Name of State: _____) (Citation of Statute: _____)

I hereby declare that the nonprofit organization identified above qualifies as a nonprofit organization as defined in 37 CFR 1.9(e) for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code with regard to the invention entitled RNA INTERFERENCE PATHWAY GENES AS TOOLS FOR TARGETED GENETIC INTERFERENCE by inventor(s) CRAIG C. MELLO, HIROAKI TABARA, ALLA GRISHOK, ANDREW FIRE AND described in:

- ☐ the specification filed herewith.
☒ application serial no. 09/689,992, filed October 13, 2000.
☐ patent no. , issued .

I hereby declare that rights under contract or law have been conveyed to and remain with the nonprofit organization with regard to the above identified invention.

If the rights held by the nonprofit organization are not exclusive, each individual, concern or organization having rights to the invention is listed below* and no rights to the invention are held by any person, other than the inventor, who could not qualify as a small business concern under 37 CFR 1.9(c) or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

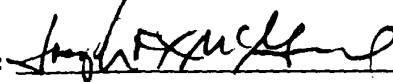
*NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

Full Name: Carnegie Institute of Washington
 Address: 1530 P Street NW, Washington, D.C. 20005
☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☒ NONPROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status when any new rule 53 application is filed or prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

Name:	Joseph F. X. McGuirl
Title:	Executive Director, Commercial Ventures and Intellectual Property
Address:	University of Massachusetts, One Beacon Street, 26 th Floor, Boston, MA 02108

Signature:  Date: 1/24/01